Listing of Claims

This listing of claims will replace all prior versions of claims and listings of claims in the application:

Please cancel claim 15.

1. (previously presented) A method for handling a failed disk drive in a redundancy group of disk drives in an array of disk drives, the failed disk drive located in a failed disk drive slot, comprising:

creating a mirrored subsystem within the array, the subsystem including a temporary disk drive and the failed disk drive slot; and

reconfiguring the redundancy group to consist of the disk drives of the redundancy group that have not failed and the mirrored subsystem, such that the mirrored subsystem is substituted for the failed disk drive in the redundancy group and the redundancy of the redundancy group is restored, when the failed disk drive contains redundancy data for the redundancy group

2. (original) A method as in claim 1, further comprising:

inserting a replacement disk drive in the failed disk drive slot;

copying data from the temporary disk drive to the replacement disk drive; and

replacing the mirrored subsystem with the replacement disk drive after the data on the replacement disk drive matches the data on the temporary disk drive.

3. (original) A method as in claim 1, further comprising:

reconstructing each data block of the failed disk drive; and

writing each reconstructed data block to the mirrored subsystem.

4. (original) A method as in claim 2 , wherein the redundancy group is a RAID-5 array.

5. (original) A method as in claim 2 , wherein the redundancy group a RAID-3 array.

6. (original) A method as in claim 2 , wherein the redundancy group is a RAID-1/0 array.

7. (original) A method as in claim 2 , wherein the redundancy group is a RAID-1 array.

8. (original) A method as in claim 3, wherein the redundancy group is a RAID-5 array.

9. (original) A method as in claim 3, wherein the redundancy group is a RAID-3 array.

10. (original) A method as in claim 3, wherein the redundancy group is a RAID-1/0 array.

11. (original) A method as in claim 3, wherein the redundancy group is a RAID-1 array.

12. (original) A method as in claim 2, wherein the mirrored subsystem is a RAID-1 array.

13. (original) A method as in claim 3, wherein the mirrored subsystem is a RAID-1 array.

14. (original) A method as in claim 3, further comprising:

inserting a replacement disk drive in the failed disk drive slot;

copying data from the temporary disk drive to the replacement disk drive; and

replacing the mirrored subsystem with the replacement disk drive after the data on the replacement disk drive matches the data on the temporary disk drive.

15. (cancelled)

16. (previously presented) A computer program product for use on a computer system for handling a failed disk drive in a redundancy group of disk drives in an array of disk drives, the failed disk drive located in a failed disk drive slot, the computer program product comprising a computer usable medium having computer readable program code thereon, the computer readable program code including program code for:

creating a mirrored subsystem within the array using a temporary disk drive and the failed disk drive slot;

reconfiguring the redundancy group to consist of the disk drives of the redundancy group that have not failed and the mirrored subsystem, such that the mirrored subsystem is substituted for the failed disk drive in the redundancy group; and

reconstructing each data block of the failed disk drive in the redundancy group; and

writing each reconstructed data block to the mirrored subsystem.

17. (original) A computer program product as in claim 16, further including program code for:

copying data from the temporary disk drive to a replacement disk drive in the failed disk drive slot; and

replacing the mirrored subsystem with the replacement disk drive after the data on the replacement disk drive matches the data on the temporary disk drive.

18. (original) A disk drive array system comprising:

a redundancy group comprising at least two disk drives and associated disk drive slots;

a temporary disk drive with an associated temporary disk drive slot;

logic that detects a failure of one of the disk drives in the redundancy group;

logic that reconfigures the redundancy group to comprise the disk drives in the redundancy group that have not failed and a second storage array, the second storage array operating as a mirrored subsystem comprising the temporary disk drive and the disk drive slot associated with the failed disk; and

logic that reconstructs the data blocks on the failed drive to the mirrored subsystem.

19. (previously presented) A disk drive array system as in claim 18, further including:

logic that restores the redundancy group to its initial configuration, a replacement disk drive replacing the failed disk drive, after the temporary disk drive and the replacement drive inserted in the disk drive slot associated with the failed disk drive contain the same data.